



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

JUN - 7 2010

REPLY TO THE ATTENTION OF:

WW-16J

U.S. Army Corps of Engineers, Louisville District
ATTN: Ann M. Nye, CELRL-OP-FE
P.O. Box 489
Newburg, Indiana 47629-0489

Subject: Triad Mining – Log Creek Expansion, LRL-2009-1048-amn

Dear Ms. Nye:

In April 2010, Triad Mining (Triad) submitted revisions to the Log Creek Expansion Project (S-32) Section 404 permit application (permit application). The original permit was public noticed on February 3, 2010. As currently proposed, the preferred alternative would impact 49,416 linear feet of streams, 7.11 acres of wetlands and 34.23 acres of open water with in the South Patoka River watershed. There has been no reduction in the proposed impacts from the public notice. In addition to the revised permit application, EPA has reviewed Dr. Mark Pyron's March 18, 2010 letter regarding Biological Monitoring. We offer the following comments and questions based on our review:

Previous, Proposed and Future Mining of Log Creek Complex and Potential Cumulative Effects

The applicant has detailed the history of surface mining permits and operations within the boundaries of the currently proposed Log Creek Complex S-32 and U-32 permit areas. However, there was no discussion of any Section 404 permits obtained within this area or clarification of impacts to water resources within the current application in regards to the previously mined northern portion of the Log Creek Complex. EPA requests that the applicant quantify the previous impacts to water resources within the S-32 and U-32 areas.

The currently proposed alternative would impact 49,416 linear feet of headwater streams, 7.11 acres of wetlands and 34.23 acres of open water with in the South Patoka River watershed. Headwater streams improve water quality by diluting and filtering pollutants from surface water runoff, reducing sediment loads and siltation downstream, maintaining the hydrological and physical dynamics of receiving waters, and providing processed leaf litter and organic matter, which are important to sustaining biological communities and beneficial uses of downstream waters.

Triad described an additional future expansion of the Log Creek Complex on page 1 of the permit application. EPA requests the approximate surface acreage of this area, along with an estimate of any proposed impacts to water resources. Given the landscape position of current mine, the location of the coal seams, and the mining methods currently used in the area, EPA believes that substantial impacts to water resources will occur in the foreseeable future. This point was emphasized in the applicant's Alternatives Analysis with the following statements:

“After evaluation of these sites, it was determined that construction of the necessary facilities on all alternate locations would result in discharges into Waters of the United States and most of the alternate sites would impact areas of prime farmland. Development of a facility of this nature at all considered sites would have similar impacts to those at the proposed site due to the similar environmental conditions and topography of properties in the area.”

“As impacts were generally similar for alternate facility locations examined, the proposed site was most advantageous because it would limit impacts to a confined area within the headwaters of two watersheds. Conditions at the Log Creek Complex site also allowed for configuration of the mine boundary to avoid impacts to several jurisdictional streams and wetlands, as well as re-mining previously disturbed and reclaimed areas.”

The cumulative impact assessment does not include the past, current (to include recently permitted actions in the watershed), and future impacts. As you know, these impacts must also be taken into account when evaluating the proposed project. In the following statement the applicant references the general extent of coal mining within the watershed and the impact on water resources:

“The areas to be disturbed by Triad Mining's Log Creek Complex largely have an upland setting near the drainage break for the South Fork Patoka River basin and the Smith Fork stream basin. The area has been extensively surface mined and many local streams have been filled by pre-SMCRA and post-SMCRA mining.”

Despite this general statement about the loss of “many local streams,” no further discussion about how these impacts may affect the watershed is provided. The waterbody is listed by the State of Indiana for impaired biological communities. The applicant must expand the discussion to address how they will prevent further impairment. The additional loss of headwater tributaries caused by the proposed project has the potential to exacerbate existing water quality impairments and further degrade watershed conditions.

Alternatives Analysis

EPA recognizes that Triad has revised the Alternatives Analysis, however, they have not presented a reasonable range of alternatives that avoid and minimize the impacts to streams and wetlands onsite. The amount of effort and detail in the analysis should be commensurate with the level of aquatic resource impacted. EPA asks for more substantive information about the practicability of each method and combinations of methods considering cost, existing technology and logistics. The analysis does not satisfy the 404(b)(1) guideline which provide the framework for sequencing (avoidance, minimization, and compensation for unavoidable impacts to aquatic resources). The first step is the identification of the Least Damaging Practicable Alternative (LEDPA). At present, there is not enough information present to determine if this alternative is the LEDPA.

Mitigation

After avoidance and minimization efforts are complete, the next step in the 404(b)(1) Guidelines sequence is mitigation for unavoidable impacts. As previously stated, EPA believes that the LEDPA has not been identified. At present, the compensatory mitigation proposed is deficient and should be proposed in light of the significant past, present, and foreseeable effects occurring in the watershed. This plan is also not in compliance with the 2008 Mitigation Rule for the following reasons:

Stream Mitigation

The stream information provided in Triad's "Restored Streams" table (table) provided with the response letter and the mitigation maps provided in Attachment 4-I (attachment) to the permit application are different. For example, the total wetland mitigation acreage is listed as 9.86 acres in the attachment and in the report narrative but as 17.76 acres on the table. Furthermore, the total restored ephemeral stream length provided in the table is 9,963 linear feet and the total restored intermittent stream is 20,452 linear feet. These restored stream totals do not match the restored stream totals provided in the attachment of the permit application: 8,784 linear feet of ephemeral stream and 24,152 linear feet of intermittent stream. EPA asks that the information be revised and the correct numbers be used in the application and all supporting documents and maps.

EPA understands that the reconstruction of all streams may not be possible. However, this would not preclude the applicant from addressing proposed shortage of mitigation on-site within the northern portion of the Log Creek complex, where there are several streams that could be restored or enhanced. This could be an appropriate area in which to compensate for stream impacts, address temporal loss and the account for the stated uncertainty of the applicant's stream mitigation plan. If a deficit remains after all on site options have been considered, the applicant should propose off-site, in-kind mitigation within the South Fork Patoka River watershed.

The “foot point” methodology should not be used to calculate out-of-kind mitigation. The 2008 Compensatory Mitigation Rule¹ (Mitigation Rule) requires that “the required compensatory mitigation shall be of a similar type to the affected aquatic resource” unless the District Engineer uses the watershed approach to determine that out-of-kind mitigation will serve the aquatic resource needs of the watershed.² The mitigation rule also creates a strong preference for in-kind mitigation. In-kind refers to a “resource of a similar structural and functional type as the impacted resource.”³ For difficult-to-replace resources, such as streams, “the required compensation should be provided, if practicable, through in-kind rehabilitation, enhancement, or preservation, since there is greater certainty that these methods of compensation will successfully offset permitted impacts.”⁴ While there are clear overlaps in some functions and values, the role of headwaters in the river continuum is not equivalent to a wetland and should not be mitigated out-of-kind.

The mitigation plan defines mitigation success as the re-establishment of 90% of intermittent streams and 85% ephemeral streams. Triad maintains that there will be an “ecological lift in the restored stream channel(s).” However, this does not consider the total loss of stream functions and values on-site. Using the information provided in Attachment 4-I, there would be a deficit of 15,503 feet of stream and a deficit of 853,032 “foot-points” of stream function on the entire site, which would not result in an ecological lift to the watershed.

EPA agrees that a significant portion of Indiana’s historic wetlands and streams have been lost. Therefore, it is important to protect the remaining wetland and stream resources from continued decline. Given the previously stated concerns over 1) the loss of streams within the watershed, 2) the net loss of stream footage and function onsite, 3) Triad’s mitigation success criteria of percent stream length restored, 4) current and proposed surrounding land use, and 5) the objectives within the Compensatory Mitigation Rule for a watershed approach, mitigation ratios would need to be provided at a ratio greater than 1:1 for linear feet of stream impacts.⁵

Stream Design

Triad has proposed to mitigate some streams with a design “similar to a Rosgen “B” type stream. Typically, Rosgen B streams are located within a narrow valley which is dissimilar from the project site. Also the streams as proposed are nearly straight with a sinuosity of 1.01. EPA requests the applicant provide the rationale for this stream design and explain how the streams will be higher quality than existing streams.

¹ 33 C.F.R. § 332 et. seq.; 40 C.F.R. § 230.91-230.98

² 40 C.F.R. § 230.93(e)(2)

³ 40 C.F.R. § 230.92

⁴ 40 C.F.R. § 230.93(e)(3)

⁵ 40 CFR 230.9 f(2)

Stream Buffers

The stream buffer plantings conflict between the letter and the revised permit application. The table included with the letter shows that all the restored streams would have a wooded buffer. Conversely, page 15 of the permit application states, “restored streams will be protected by vegetated buffer zones as shown on the Log Creek Mitigation Map to minimize sedimentation of the restored stream channels. Riparian buffer zones will consist of grass-legume vegetation or tree and/or shrub plantings depending on the approved post-mine land use for the restored channel(s).”

The stream buffer plantings need to be clarified and consistently discussed throughout the permit application. For example, the table included with the letter indicated that buffers will be forested on both sides of the restored streams; however, the application text discusses non-forested buffers on both sides. The lack of buffers on a stream will preclude it from use as compensatory mitigation.

Wetland Mitigation

We agree with the mitigation ratio of 3:1 for forested wetlands. The location on the wetlands along a relocated stream channel is preferable. However, the plan as described contains minimal detail and references the South Augusta Mine mitigation project. To meet the minimum requirements as outlined in the 2008 Mitigation Rule, the current plan needs to address or expand the following sections the definitions of the required components of the mitigation plan as listed below as defined in the 2008 Mitigation Rule⁶:

-Maintenance work plan – detailed written specification and work description for the mitigation project, including but not limited to, the geographic boundaries of the project; construction methods, timing, and sequencing, source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive species; the proposed grading plan, including elevations and slopes of the substrates; soil management; erosion control measures. For stream compensatory mitigation plans work plan may also include other relevant information such as platform geometry, channel form, watershed size, design discharge and riparian plantings.

-Ecological performance based standards – must be based on attributes that are objective and verifiable

-Monitoring requirements – a description of parameters to be monitored to determine whether the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule of monitoring and reporting on monitoring results to the District Engineer must be included.

⁶ 33 C.F.R. § 332 et. seq.; 40 C.F.R. § 230.91-230.98

-Adaptive management – a management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing corrective measures to address both foreseeable and unforeseen circumstances that adversity affect compensatory mitigation success.

-Financial assurances – a description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed in accordance with its performance standards.

-Long-term management – a description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resources, including real estate instruments or other available mechanisms as appropriate.

-Mitigation site protection - Triad is currently negotiating to purchase the land on which the wetland mitigation is located. Once the site protection is finalized, please provide documentation to the EPA.

Biological Stream Assessment

EPA requests clarification on the physical limits of the IBI study, as there are several streams in the northern portion of site. The extent and effects of agriculture on streams in the region had been well documented; however EPA expects that on a site with known previous mining and remnant mining features (impoundments and pits) the effects of mining on the biological communities would be discussed. In his letter, Dr. Pyron mentioned that no data was taken on streams with a pH near 3.0. To demonstrate the completeness of the evaluation EPA asks for a list/table that details, at a minimum, all streams, their flow regime, whether water was present on date of sampling, macroinvertebrate data where present, fish data where present, pH and any other water quality data recorded.

In summary, EPA continues to object to the issuance of a permit for the project as proposed for the above-mentioned reasons. While we recognize and appreciate that Triad has addressed some of our comments, there are still a number of important unresolved issues that must be addressed and information that must be provided to the Corps before an informed permit decision can be made. Please keep EPA apprised of any response to these comments. Please feel free to contact Melissa Gebien at 312-886-6833 or Andrea Schaller at 312-886-0746 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Swenson". The signature is fluid and cursive, with the first name "Peter" and last name "Swenson" clearly distinguishable.

Peter Swenson

Chief, Watersheds and Wetlands Branch

cc: Marylou Poppa Renshaw, IDEM
100 N. Senate Avenue, Room IGCN 1255
Indianapolis, Indiana 46204

Michael Litwin, USFWS
Bloomington Ecological Services Field Office
620 South Walker Street
Bloomington, Indiana 47403